

Monsanto

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June 17, 1997

Ms. Kathleen Stryker
Remedial Project Manager
USEPA Region 10
1200 Sixth Avenue, HW 115
Seattle, Washington 98101

Dear Ms. Stryker:

Based on my telephone conversation with Mr. Brincefield on June 10, 1997 and his facsimile transmission on that date, please find enclosed our comments to the Record of Decision for the Soda Springs Plant (ROD) dated April 1997. We appreciate this opportunity to recommend corrections and improvements to the ROD, and look forward to working together in this matter.

We have three types of comments:

Inadvertent errors and other areas where accuracy can be improved;

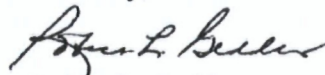
Unnecessary specifications of some details of potential RD/RA that were never discussed, and that Monsanto believes are more appropriately addressed by performance standards rather than by exact specification;

Changes made in the selection remedy from the Proposed Action Plan that we believe are motivated by misunderstanding of the intent of some public comments.

As EPA-10 project team transitions to new remedial management, Monsanto is particularly sensitive to the accuracy of the record and the need to continue close working relationships to minimize misunderstanding and to constructively conclude the CERCLA process.

Monsanto generally supports the selected remedies, as outlined in the Record of Decision, and is anxious to aggressively work toward a successful conclusion of the superfund efforts at the Soda Springs site. We commit to continue to work closely with EPA-10 in response to the Special Notice Letter, draft Consent Decree, and draft Statement of Work for RD/RA. We will be pleased to meet with you in person or by telephone at your earliest convenience to explain or discuss these issues.

Sincerely,



Robert L. Geddes
Project Coordinator

AR 3.2



COMMENTS - RECORD OF DECISION FOR THE MONSANTO SODA SPRINGS PLANT SITE

Document: April 1997 Record of Decision, Monsanto Company Superfund Site
in Caribou County, Idaho
Project: Monsanto Soda Springs Plant RI/FS and RD/RA
Reviewer: Monsanto and Montgomery Watson

Date: June 18, 1997

As noted in the transmittal, three types of comments are included below:

- Inadvertent errors and other areas where accuracy can be improved
- Specification of some details of potential RD/RA that have not been discussed previously, and that Monsanto believes are more appropriately addressed by performance standards rather than by exact specifications (please refer to comments 34 and 36)
- Changes made in the selected remedy from the Proposed Plan that may have been motivated by misunderstanding of the intent of some public comments (please refer to comments 4 and 35).

The comments are organized in order of appearance in the ROD, and designated by section, page, paragraph, and sentence references, as appropriate. Paragraph numbering begins with the first complete paragraph beginning on a page. In cases where a comment references multiple locations in the ROD, the comment is presented at the first occurrence and all references are provided.

No.	Section	Comment
	Declaration of the ROD:	
1	Assessment of the Site p. 1, ¶ 3	Although the phrase "imminent and substantial endangerment" is standard in CERCLA ROD usage, these terms are likely to be misunderstood by the public, and particularly by neighbors to the Monsanto Soda Springs Plant. In literal terms, there is no "imminent and substantial endangerment" to public health, welfare, or the environment at or associated with the Plant. This is borne out by risk assessments conducted by both EPA-10 (the Baseline Risk Assessment, or BRA) and Monsanto (the Stochastic Risk Assessment, or SRA). This terminology sends a different message than has been conveyed by EPA in its interactions with the community during public meetings, and may potentially undermine the credibility of the decision-making process. Please reconsider the use of these terms, or adding qualifiers in the text to assure that a realistic perspective is maintained.

**COMMENTS - ROD FOR THE MONSANTO SODA SPRINGS PLANT SITE
(CONTINUED)**

June 18, 1997

No	Section	Comment
2	Description of the Selected Remedy p. 1, 1st • Also, p. 21, ¶s 3, 4 p. 28, ¶ 1, sentences 2, 4 p. 35, ¶ 1, sentence 1 p. 51, Table 6	<p>EPA-10 has suggested since the RAO Memorandum that manganese (Mn) should be a Constituent of Concern in groundwater under and near the Monsanto Soda Springs Plant, based on a secondary MCL. Our understanding is that the reasons for secondary MCLs for Cl, Fe, SO₄, and Mn are related to staining and taste, rather than to "risk" to human or environmental receptors. In the ROD a "risk-based concentration" (RBC) is established for Mn. No basis or calculations are provided to support this RBC. We would appreciate the opportunity to review and discuss the basis for the RBC established in the ROD.</p> <p>Please also consider that concentrations of Mn above the RBC may naturally occur in surface water in this area, or may result from other sources discharging to Soda Creek "upstream" of the Plant discharge. If the RBC for Mn is retained as part of the compliance point monitoring program, we believe that further evaluation is warranted to avoid confusion of potential Mn impacts to surface water and springs.</p>
3	p. 2, ¶ 3, last sentence p. 14, ¶ 3 p. 36, ¶ 4, final sentence	<p>Monsanto does intend to continue operation of the Plant for a substantial time ("over 30 years" may even tend to understate the situation). Monsanto currently has about 80 years of proven ore reserves. Adding this to the text could strengthen the discussion.</p>
4	Statutory Determinations p. 2, ¶ 1, sentence 1	<p>Monsanto believes that the option for a landowner to elect an excavation, removal, and replacement remedy for soil does not provide the best protectiveness of either human health or the environment. Our evaluation indicates that the risk associated with an Institutional Controls remedy is extremely low, certainly far lower than the risk to human health that would be associated with the construction hazards related to undertaking an excavation, removal, and replacement remedy. Such action could also cause unnecessary adverse environmental impacts, as well as an adverse welfare impact due to the difficulty in replacing topsoil on valued agricultural land. This provision also has the potential to render the selected remedy potentially cost-ineffective by unnecessarily increasing the cost relative to the preferred remedy set forth in the Proposed Plan.</p>

	DECISION SUMMARY	
5	Site Location and Description p. 3, ¶ 4, sentence 2	Please consider correcting the typographic error: "Ledge Creek Springs" is actually "Ledger Creek Springs."
6	p. 3, ¶ 4, sentence 5	Hooper Springs is not hydraulically downgradient from the Plant. At worst it is side-gradient; for all practical purposes it is upgradient. Please consider revising the text to improve accuracy.
7	p. 3, ¶ 4, last sentence	The home in question was connected to city water by both Monsanto and Kerr-McGee. Please consider revising the text to improve accuracy.
8	p. 5, ¶ 3, sentence 1	The sodic nature of Soda Creek should be mentioned, to provide a realistic context for understanding the nature of any impacts. Please consider revising the text to improve accuracy.
9	p. 5, ¶ 3, final sentence	The fact that virtually the entire flow of the creek is diverted during the irrigation season should be mentioned here for clarity. Please consider revising the text to improve accuracy.
10	p. 6, ¶ 1, final sentence	Not all of the soils within the Plant are covered by facilities or materials. Those that are not are well correlated with the surrounding soils—they are identical; and, those soils underlying the facilities and materials are very likely identical, too. Please consider revising the text to improve accuracy.
11	Site History and Enforcement Action p. 9, ¶ 3, sentence 1	E&E's site inspection recommendation for no further action other than monitoring should be mentioned. Please consider revising the text to improve accuracy.
12	Highlights of Community Participation p. 13, ¶ 3, final sentence	From our review of written comments from the community and the transcript of the August 13, 1997 Public Meeting, it appears that some of the written comments and comments received at the public meeting are not summarized or addressed in the Responsiveness Summary.
13	Scope and Role of Response Action within Site Strategy p. 13, ¶ 2, sentence 2	Much in the way of source control, including fugitive emissions control, was addressed prior to listing. In fact, 9 of the 13 bulleted actions summarized on pp. 9–11 were conducted prior to listing. Please consider revising the text to improve accuracy.
14	p. 18, ¶ 2, sentences 4 through 6	The inherent toxicity of the background samples could also be attributed to the mineralized nature of Soda Creek, not just the high CO ₂ content. Please consider deleting the 5th sentence from this discussion.
15	p. 21, ¶s 3, 5 p. 24, Table 2	Please consider correcting references in the ROD to inorganic nitrogen (results are expressed as NH ₃ and NO ₃ rather than NH ₃ -N and NO ₃ -N).

**COMMENTS - ROD FOR THE MONSANTO SODA SPRINGS PLANT SITE
(CONTINUED)**

June 18, 1997

No	Section	Comment
16	p. 23, ¶ 2, final sentence	While these land-ownership statements are appropriate in reference to the FS, they are no longer accurate. Subsequent to the Public Meeting, Monsanto has been successful in acquiring the outstanding property to the north of the Plant fenceline, reducing the number of landowners by two. Please consider revising the text to improve accuracy.
17	p. 23, ¶ 5, final sentence	Hooper Spring has not been contaminated by Plant activities — the spring is not downgradient from the Plant as is evident from the plumes mapped in Figure 6 coupled with the knowledge that ground water flows in a southerly direction. The only southwesterly flow component is at the very southwest corner of the Plant in close proximity to the Mormon Springs complex. The marsh and its associated effluent stream between Mormon Springs and Hooper Spring poses an effective hydraulic discontinuity that would prevent contamination of Hooper Spring even if it weren't side- or up-gradient of the Plant. Further evidence was provided by the groundwater age-dating comparisons conducted during the RI. Please consider revising the text to improve accuracy.
18	p. 23, ¶ 6, sentence 4	The bald eagle is not endangered within Idaho; it is threatened. Please consider revising the text to improve accuracy.
19	p. 24, Table 2	No elevated levels of Cd have been detected in the water column of Soda Creek. Please consider revising the text to improve accuracy.
20	p. 25, ¶ 4, 3rd •	Background radiation in the area is not relatively high; it is relatively normal. Please consider revising the text to improve accuracy.
21	p. 26, final ¶, 3rd • (see top of p. 27)	The current residential scenario developed in the BRA evaluated hypothetical / potential future (not really "current") residential exposures. Please consider revising the text to improve accuracy.
22	p. 29, Tables 2 and 3	As we discussed in teleconference on June 10, 1997, these tables were inadvertently selected from a draft risk assessment; and had been revised substantially in the final BRA. Please insert the intended tables.
23	p. 30, Table 4	This table needs to be reevaluated in light of comment 22 above.
24	p. 31, ¶ 1, 2	Both the SRA and BRA support the selected Institutional Controls, Monitored Natural Attenuation with Institutional Controls, and No Further Action remedies for off-site soils, groundwater, and other media. In some ways, the SRA contributes to the BRA's uncertainty analysis summarized here, and thus confirms the BRA's conclusions. Please consider whether clarifying this agreement would strengthen this presentation.

**COMMENTS - ROD FOR THE MONSANTO SODA SPRINGS PLANT SITE
(CONTINUED)**

June 18, 1997

No	Section	Comment
25	p. 32, ¶ 2, sentence 2 p. 34, ¶ 5	Both the BRA ecological assessment and Appendix D in the FS focused on mice and vegetation adjacent to the Plant. There are no sensitive or threatened species in the vicinity of the Plant. No toxic aquatic effects attributed to Plant operations have been documented. Please consider revising the discussion to improve accuracy.
26	p. 33, ¶ 2, sentence 2	Given the agreement between Monsanto and EPA-10 that Monsanto intends to continue operating the Soda Springs Plant well into the future, please reconsider whether it is appropriate to reference the "future industrial" scenario evaluated in the BRA as a reason for action.
27	p. 33, ¶ 4, sentence 2	Please consider correcting the typographic error: "known or systemic carcinogens...." should read "known or suspected carcinogens...."
28	p. 34, ¶ 4 p. 35, ¶ 4, sentence 1 p. 45, item 2 a) p. 43, Table 5	Please reconsider the omission in the ROD of UMTRCA as an ARAR for the Soda Springs Plant off-site soils. At EPA-10's suggestion, UMTRCA was evaluated and included as potentially "relevant and appropriate" (but not "applicable") in Appendix C of the approved final FS.
29	p. 35, ¶ 1, final sentence	The FS intentionally phrased this RAO for groundwater to "Prevent the ingestion of groundwater..." The BRA did not consider it necessary to assess inhalation or direct contact of groundwater. MCLs for these constituents are specifically based on ingestion, not on inhalation or direct contact. Please reconsider the wording used here in the ROD.
30	p. 35, ¶ 3 <u>For Human Health</u> Also, p. 36, ¶ 2, sentence 1	Please reconsider the action threshold of 1×10^{-5} introduced in the ROD for carcinogenic metals. We believe that use of a consistent risk threshold (3×10^{-4}) for off-site soils is appropriate, whether potential exposure could be to radiological compounds or to metals. Please note from the BRA assessment that the risks associated with As and Be in off-site soils are very small in comparison to those associated with ^{226}Ra . It may be very difficult to explain to the community why it is 30 times more acceptable to contract cancer from a radiological substance than from a metal. Also, cancer potentially caused by As (mostly skin cancer) is far more treatable and survivable than a cancer caused by gamma radiation. Please note that the property containing the highest s of As and Be (immediately to the north of the northern Plant fenceline) is now under Monsanto ownership. Please consider changing the action threshold for metals to target a 3×10^{-4} potential risk.

**COMMENTS - ROD FOR THE MONSANTO SODA SPRINGS PLANT SITE
(CONTINUED)**

June 18, 1997

No	Section	Comment
31	p. 35, ¶ 5, sentence 2	Please consider modifying this sentence to read "risk estimates as high as 5×10^{-4} to be protective." This is not meant to argue the 3×10^{-4} goal specified in this ROD: clarifying the historical precedent of up to 5×10^{-4} within the region may help to avoid misunderstandings and strengthens the presentation for no remediation requirements specific to potential occupational exposures.
32	p. 36, ¶ 4, sentence 1	Please consider revising the text to clarify that risks in excess of the risk range are those $> 10^{-4}$, not $> 10^{-3}$.
33	Description of Alternatives p. 37, ¶ 5, sentence 1	This discussion could be improved by adding that groundwater is not currently being used as a drinking water supply within the area of the plume nor is it expected to be within the foreseeable future.
34	p. 42, ¶ 2 p. 49, 3rd • p. 52, ¶ 3, final sentence	Please consider whether the ROD may implement a misunderstanding of the intended soil removal alternative presented in the FS. Removal of 6 inches was used in the FS as a reasonable basis for estimating costs, primarily because this is a practical thickness for removal using conventional equipment. However, RI data clearly indicate that removal of this thickness (or any soil below an inch, in most locations) is not necessary to meet a performance criterion based on the RGs. Please consider revising the presentation of this alternative to indicate the intent to "remove affected soil representing potential risk above 3×10^{-4} from the surface" without unnecessarily specifying a thickness.
35	p. 48, item 9	<p>Based on the success to date of Monsanto's ongoing property buffer acquisition program and review of the written comments received by EPA, we believe that EPA may have misunderstood a key community acceptance issue, and thus acted unnecessarily in changing the preferred alternative. The letters received by EPA from landowners that "viewed their property as having been impacted, their property values as having been affected, and supported cleanup over land-use restrictions" may have been based on a misunderstanding that they would not receive compensation for what they apparently perceived as "zoning restrictions." In fact, the Gunnell family (authors of three of the four referenced letters) had already sold their adjacent property to Monsanto before the ROD was issued, and the other commenters are currently in active negotiations with Monsanto for its purchase of a restrictive covenant.</p> <p>We understood from previous discussions with EPA that an institutional controls remedy without a contingency (and certainly without election of cleanup) might be agreed provided that significant progress in implementing institutional controls could be demonstrated before a ROD was signed. Monsanto has clearly made significant progress.</p> <p>Please reconsider the decision to change the proposed remedy (and the need for any contingency or election beyond Institutional Controls for off-site soils) in light of these events.</p>

**COMMENTS - ROD FOR THE MONSANTO SODA SPRINGS PLANT SITE
(CONTINUED)**

June 18, 1997

No	Section	Comment
36	p. 49, ¶ 1, bullet 3	As with comment 34 above, please reconsider the appropriateness of specifying in the ROD that any soil that might be removed would be "contained within the Plant and covered with at least 12 inches of clean soil and vegetation (or some other protective cover)." We recommend that stating a performance standard, such as a requirement that soil be transported within the Plant and maintained using reasonable engineering controls, is a better approach.
37	p. 50, ¶ 2, item 2	As written, it may be unclear to the community exactly what is intended by EPA from the arbitration process, and under what conditions arbitration might be implemented. We assume the intent is that either party (an adjacent landowner or Monsanto) might request arbitration if the landowner intends to elect sale of property or restrictive covenant, but negotiations on price are stalled. Although we think the need for arbitration is unlikely, please consider clarifying the intent to avoid misunderstandings.
38	p. 51, final ¶, final sentence	<p>Please reevaluate the RGs presented here for arsenic (As) and beryllium (Be).</p> <p>Both the units and the values presented here are apparently in error. If the Draft Phase II FS was used as the basis for 21 and 8 mg/kg (as suggested in the June 10, 1997 note), please recall that the calculation method was questioned by EPA in comments on the Draft Phase II FS, and a revised calculation procedure was agreed (see Appendix A of the FS) and utilized in the final Phase II FS and in subsequent FS submittals.</p> <p>Several reasonable approaches are available to agree upon RGs for As and Be. As presented in comment 30 above, we believe strongly that a consistent risk level (3×10^{-4}) for off-site soils is the most appropriate target, whether for radiological compounds or metals. Following the methods presented in Appendix A to the FS, RGs based on a consistent 3×10^{-4} risk level would be 142 mg/kg for As and 91 mg/kg for Be.</p>
39	Documentation of Significant Changes p. 57, ¶ 1, sentence 2	<p>As discussed in comments 4 and 35 above, we request that EPA reconsider the decision process used in changing from institutional controls (in the FS) to institutional controls with contingency (in the proposed plan) to an election of either institutional controls or removal (in the ROD). We believe that a cost/benefit analysis does not justify elevation of excavation and disposal to parity with institutional controls. The cost is substantially higher and the risk reduction is not necessarily improved and may be negative due to the construction-related hazards associated with moving the soil.</p> <p>We also feel that the new specifications added in the ROD (see comments 34 and 36) are not the best approach, and that the decision process could be better served using performance standards in lieu of arbitrary specifications.</p>

**COMMENTS - ROD FOR THE MONSANTO SODA SPRINGS PLANT SITE
(CONTINUED)**

June 18, 1997

No	Section	Comment
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	RESPONSIVENESS SUMMARY	
40	p. 61, ¶ 7, 8	Please consider expanding the discussion presented in the Responsiveness Summary to incorporate all the comments, including verbal comments during the Public Meeting and written comments from the mayor of Soda Springs. In some cases, the meeting transcript indicates that EPA promised further response would be provided in the ROD to issues that are not summarized here.
41	p. 62, Q&A 2	Monsanto agrees with EPA-10's bottom-line conclusion on the issue of potential risks to agricultural workers. Please consider providing the new agricultural risk estimates. The summary provided here may lead to misunderstanding by some concerned citizens.